

tion 1. The reaction is started by adding 50 μ l of solution 2 to each well. This may be done with a multichannel pipettor either manually or with automated liquid handling devices. The microtiter plate is then transferred to a microplate absorbance reader and multiple absorbance readings at 340 nm are taken for each well in a kinetic mode. The observed rate of change, which is proportional to the ATPase rate, is then plotted as a function of the compound concentration. For a standard IC_{50} determination the data acquired is fit by the following four parameter equation using a nonlinear fitting program (e.g., Graft 4):

$$y = \frac{\text{Range}}{1 + \left(\frac{x}{IC_{50}}\right)^s} + \text{Background}$$

where y is the observed rate and x the compound concentration.

[1264] Other chemical entities of this class were found to inhibit cell proliferation, although GI_{50} values varied. GI_{50} values for the chemical entities tested ranged from 200 nM to greater than the highest concentration tested. By this we mean that although most of the chemical entities that inhibited mitotic kinesin activity biochemically did inhibit cell proliferation, for some, at the highest concentration tested (generally about 20 μ M), cell growth was inhibited less than 50%. Many of the chemical entities have GI_{50} values less than 10 μ M, and several have GI_{50} values less than 1 μ M. Anti-proliferative compounds that have been successfully applied in the clinic to treatment of cancer (cancer chemotherapeutics) have GI_{50} 's that vary greatly. For example, in A549 cells, paclitaxel GI_{50} is 4 nM, doxorubicin is 63 nM, 5-fluorouracil is 1 μ M, and hydroxyurea is 500 μ M (data provided by National Cancer Institute, Developmental Therapeutic Program, <http://dtp.nci.nih.gov/>). Therefore, compounds that inhibit cellular proliferation at virtually any concentration may be useful.

What is claimed is:

1-46. (canceled)

47. A compound that is [4-((1R)-2,2,2-trifluoro-isopropoxy)-3-chlorophenyl]-N-[(1S)-3-hydroxy-1-({4-[2-(1-hydroxy-isopropyl)-1-methylimidazol-4-yl]phenyl}methyl)propyl]carboxamide.

48. A composition comprising at least one pharmaceutical excipient and a compound according to claim 47.

49. The composition of claim 48 wherein the composition is formulated for administration by a route chosen from oral, subcutaneous, intravenous, intranasal, transdermal, intraperitoneal, intramuscular, intrapulmonary, vaginal, rectal, and intraocular.

50. The composition of claim 49 wherein the composition is formulated for oral administration.

51. The composition of claim 50 wherein the composition is formulated as a tablet, capsule, or liquid.

52. The composition of claim 50 wherein the at least one pharmaceutical excipient is selected from diluents, binders, glidants, lubricants, disintegrants, colors, flavors, sweetening agents, polymers, waxes and other solubility-retarding materials.

53. The composition of claim 49 wherein the composition is formulated for intravenous administration.

54. The composition of claim 53 wherein the at least one pharmaceutical excipient comprises a sterile solution of sugars, amino acids or electrolytes.

55. The composition of claim 53 wherein the at least one pharmaceutical excipient is water for injection USP.

56. The composition of claim 48 wherein the composition is formulated for parenteral administration.

57. The composition of claim 56 wherein the at least one pharmaceutical excipient comprises a sterile solution of sugars, amino acids or electrolytes.

58. The composition of claim 56 wherein the at least one pharmaceutical excipient is water for injection USP.

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